Air Quality Permitting
Statement of Basis

June 3, 2005

Permit to Construct No. P-050411

Hilex Poly Company, Jerome

Facility ID No. 053-00011

Prepared by:

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AIR QUALITY DIVISION

FINAL PERMIT

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Acronyms, Units, and Chemical Nomenclatures

AAC	acceptable ambient concentration for toxic air pollutants non-carcinogenic increments
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pound per hour
MACT	Maximum Achievable Control Technology
NC	North Carolina
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	nitrogen oxides
NSPS	New Source Performance Standards
O_3	ozone
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
Rules	Rules for the Control of Air Pollution in Idaho
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	sulfur dioxide
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

2. FACILITY DESCRIPTION

Hilex Poly Company manufactures plastic grocery bags. Polyethylene pellets are transferred from storage bins to extruders via a vacuum handling system. The extruders forms the pellets into a tubular film which is then cooled and passed through a corona treater. A high voltage corona discharge ionizes the film surface to prepare it for printing. Ozone is generated during this process by the corona treater. The ozone is exhausted to the atmosphere. The film is wound into rolls and stored until needed for conversion into bags.

To add the print to the bags, the rolls of film pass through three bag machine lines. The film is printed, then formed into bags and packaged for shipment. The printing operation results in the emissions of volatile organic compounds (VOCs), ethanol, and ammonia.

3. FACILITY / AREA CLASSIFICATION

Hilex Poly Company is defined as a minor facility because the potential to emit particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOC), ozone (O_3), and hazardous air pollutants (HAPs) is less than the major source levels. The AIRS classification is "B" because the source is a minor facility.

The facility is located within AQCR 63 and UTM zone 11. The facility is located in Jerome County which is designated as unclassifiable for all criteria pollutants (PM_{10}, CO, NO_x, SO_2, lead, and ozone).

The AIRS information provided in Appendix A defines the classification for each regulated air pollutant at Hilex Poly Company. This required information is entered into the EPA AIRS database.

4. APPLICATION SCOPE

Hilex Poly Company has applied for a revision to their existing permit to construct (PTC) for a plastic grocery bag manufacturing facility. The changes requested are as follows:

- Increase the number of corona treaters from 10 to 13 (total emissions will not increase).
- Combine ozone emission limits from all treaters to create facility-wide lb/hr and ton/yr limits.
- Set a facility-wide corona treater kW input limit and tracking.

4.1 Application Chronology

4/14/05	Application received
4/14/05	Permit application fee of $1,000 and permit processing fee of $250 received.
4/26/05	DEQ issued e-mail confirming authorization to install alternative corona treaters
5/3/05	Application declared complete

5/13/05	Draft permit to construct issued
6/3/05	Teleconference with Hilex Poly Company regarding collecting ozone data for two versus three ozone monitoring seasons

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action:

5.1 Equipment Listing

Corona treaters (13)
Manufacturer: Enercon
Model number: CS012SF-200/2 or equivalent
Feed material: High density polyethylene
Maximum rated input capacity: Varies
Power source: Varies

Bag machines (16)
Type: Flexographic printer
Manufacturer: TCM
Model number: LTW-Maxi-153-1600mm or equivalent
Feed material: polyethylene film
Maximum rated input capacity: 0.32 T/hr

5.2 Emissions Inventory

Hilex Poly Company produces ozone emissions from the corona treaters and ammonia and VOC emissions from the bag lines.

The ozone emissions are estimated based on an emission factor supplied by the Enercon Industries Corporation, the manufacturer of the treaters, as shown in a letter from the manufacturer dated September 14, 2004. The emission factor is 0.073 lb/hr of ozone per power supply kW.

The facility will operate a total of 13 corona treaters when construction is completed. Each treater will operate between 2.5 and 12 kW (at a percentage of maximum capacity). The facility has requested that the power input be limited to a total of 70 kW/hr for all treaters combined. The ozone emissions are calculated as follows:

0.073 lb/hr O_3/kW x 70 kW = 5.11 lb/hr O_3/all corona treaters combined

5.11 lb/hr x 8760 hrs/yr / 2,000 lb/ton = 22.4 tons O_3/yr

These are the same emission estimates as were permitted in the previous permit. There is no increase in emissions.

5.3 Modeling

Because there was no increase in emissions as a result of this permit revision, no air dispersion modeling is required.

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

IDAPA 58.01.01.201 ..... Permit to Construct Required

A permit to construct is required for this facility because it does not qualify for an exemption from PTC requirements in accordance with IDAPA 58.01.01.220 – 223. This revision is required to establish limits on the operation of the additional corona treaters which, without limits, could potentially exceed the emissions limits previously evaluated and permitted in PTC No. P-040408.

5.5 Permit Conditions Review

This section describes only those permit conditions that have been revised, modified or deleted as a result of this permit action. All other permit conditions remain unchanged.

Previous Permit Condition 2.2:

2.2 Emissions Limits

Each Corona Treater

- *Ozone emissions from each corona treater shall not exceed 0.51 lb/hr.*
- *Ozone emissions from each corona treater shall not exceed 2.2 tons per any consecutive 12-month period (T/yr).*

All Corona Treaters Combined

- *Ozone emissions from all corona treaters combined shall not exceed 5.1 lb/hr.*
- *Ozone emissions from all corona treaters combined shall not exceed 22.4 tons per any consecutive 12-month period.*

Revised Permit Condition 2.2:

2.2 Emissions Limits for All Corona Treaters Combined

- *Ozone emissions from all corona treaters combined shall not exceed 5.1 lb/hr.*
- *Ozone emissions from all corona treaters combined shall not exceed 22.4 tons per any consecutive 12-month period.*

As established in the previous permitting action, Permit Condition 2.2 limits ozone emissions from all corona treaters combined to 5.1 pounds per hour and 22.4 tons per year. The individual corona treaters are no longer limited because the emissions are from the same stack.

As a surrogate for monitoring ozone directly, the permit condition requires that the kW from the power source be monitored, because, according to the manufacturer of the treaters, the amount of ozone generated can be calculated from the kW from the power source. Limiting the power source limits the ozone production. As shown in Section 5 of this statement of basis, the ozone emissions were based on a maximum power input of 70 kW per hour. Therefore, Permit Condition 2.4 is worded as follows:

Previous Permit Condition 2.4:

2.4 Power Source Limit

The power supplied to each corona treater shall not exceed seven kilowatts (7.0 kW).

Revised Permit Condition 2.4:

2.4 Power Source Limit

The power supplied to all corona treaters combined shall not exceed 70 kilowatts.

The previous Permit Condition 2.6 required that an ozone monitoring and meteorological plan be submitted and approved. The monitoring plan was submitted on February 28, 2005, and was approved by DEQ on March 24, 2005. The previous Permit Condition 2.6 also required that the ozone and meteorological site be installed and operated starting no later than May 1, 2005. In an e-mail from Doug Herlocker of Tetra Tech EMI, the consultant for Hilex Poly Company, the ozone and meteorological station is installed, calibrated, and running as of 5:00 PM on April 28, 2005. Therefore, Permit Condition 2.6 was reworded to require the ozone and meteorological site to be operated in accordance with the DEQ-approved plan commencing no later than May 1, 2005.

Previous Permit Condition 2.6:

2.6 Ozone Monitoring Plan

Permittee is required to submit an ozone and meteorological plan within 30 days of issuance of permit, or March 1, 2005 (whichever is sooner) and permittee shall have plan approved and ozone and meteorological site operation by May 1, 2005 (start date of 2005 Ozone monitoring season).

Revised Permit Condition 2.6:

2.6 Ozone Monitoring Plan

The permittee shall operate an ozone and meteorological site in accordance with a DEQ-approved ozone and meteorological plan commencing no later than May 1, 2005.

Because Permit Condition 2.4 has been revised to require only a limit on the power input to all the corona treaters combined (rather than only individually), Permit Condition 2.13 has been revised to require that the total power supplied to all the treaters combined be recorded once per day. The total is based on the sum of the power supplied to the individual treaters.

Previous Permit Condition 2.13:

2.13 Power Source Monitoring

The permittee shall monitor and record the power supplied to each corona treater once per day when operating to demonstrate compliance with Permit Condition 2.4. Power shall be expressed as kilowatts (kW). A compilation of the most recent two years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

Revised Permit Condition 2.13:

2.13 *Power Source Monitoring*

The permittee shall monitor and record the power supplied to each corona treater and calculate the total power supplied to all the corona treaters once per day when operating to demonstrate compliance with Permit Condition 2.4. Power shall be expressed as kilowatts (kW). A compilation of the most recent two years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

6. PERMIT FEES

Hilex Poly Company is not a major facility because the estimated emissions are less than major source levels. There is no increase in regulated air pollutants from this modification. IDAPA 58.01.01.225 requires a permit processing fee of $250 for permits that require no engineering analysis. The processing fee was received on April 14, 2005.

7. PERMIT REVIEW

7.1 Regional Review of Draft Permit

A draft permit was provided for review to the DEQ Twin Falls Regional Office on May 13, 2005. Comments were received on May 15, 2005, and were incorporated into the final permit.

7.2 Facility Review of Draft Permit

A draft permit was provided for review to the facility on May 13, 2005. A conference call was held on June 3, 2005 between DEQ and Hilex Poly Company to discuss the draft permit conditions. In that call, Hilex Poly Company and Bruce Louks, DEQ, agreed that after the end of the second season of ozone monitoring data collection, Hilex Poly Company and DEQ would meet to discuss the requirement of the third season of ozone monitoring. The requirement for the third season of ozone monitoring is contingent on the data collected, any source testing done to establish an actual ozone emission rate, and a revised modeling analysis.

7.3 Public Comment

Because this is an PTC revision and emissions do not increase, no opportunity for public comment on the PTC application is required in accordance with IDAPA 58.01.01.209.01.c.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommends that Hilex Poly Company be issued PTC No. P-050411 for the plastic grocery bag manufacturing facility. No public comment period is recommended, no entity has requested a comment period, and the project does not involve PSD requirements.

CZ/sd Permit No. P-050411

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APPENDIX A

AIRS Form

AIRS/AFS[a] FACILITY-WIDE CLASSIFICATION[b] DATA ENTRY FORM

Facility Name: Hilex Poly Company LLC
Facility Location: 40 West 100 South, Jerome
AIRS Number: 053-00011

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO_2	B						B	U
NO_x	B						B	U
CO	B						B	U
PM_{10}	B						B	U
PT (Particulate)	B							U
VOC	B						B	U
THAP (Total HAPs)	B						B	
			APPLICABLE SUBPART					

[a] Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

[b] AIRS/AFS Classification Codes:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.

SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.

B = Actual and **potential** emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).